

**Before the**  
**Federal Communications Commission**  
**Washington, D.C. 20554**

In the Matter of:

Public Safety and Homeland Security Bureau	)	
Seeks Comment on Request for	)	
Waiver by Los Angeles Regional	)	RM-11433
Interoperable Communications System	)	
Joint Powers Authority to Apply for	)	
700 MHz "Narrowband Reserve Channels"	)	

**Comments of**  
**Region 5 700 MHz Regional Planning Committee**

The Region 5 700 MHz Regional Planning Committee (Region 5) submits these Comments in response to the Commission's Public Notice in the above-captioned proceeding concerning a request by the Los Angeles Regional Interoperable Communications System Joint Powers Authority (LA-RICS), to permit LA-RICS and its member public safety entities in the Los Angeles metropolitan area to apply for licenses for the 700 MHz "narrowband reserve channels" and integrate those frequencies into the LA-RICS radio system<sup>1</sup>. In these comments, Region 5 supports release of the reserve channels in the Los Angeles area as requested with specific usage to be coordinated with the Regional Planning Committee (RPC).

---

<sup>1</sup> Public Notice: Public Safety and Homeland Security Bureau Seeks Comment on Request for Waiver by Los Angeles Regional Interoperable Communications System Joint Powers Authority to Apply for 700 MHz "Narrowband Reserve Channels" DA 13-39, RM-11433, released January 11, 2013.

## **Region 5 Description**

Region 5 commonly referred to as Southern California, consists of 10 counties – San Luis Obispo, Santa Barbara, Kern, Ventura, San Bernardino, Los Angeles, Orange, Riverside, San Diego, and Imperial.

The Southern California terrain is varied and rugged. Elevations range from 180 feet below sea level to over 10,000 feet above. Population is concentrated in the Los Angeles basin and surrounding areas and in San Diego and its surrounding areas. Other areas of Southern California have small concentrated areas of population with vast areas of mountains and desert with very sparse population. The Los Angeles Basin including surrounding areas requires the majority of spectrum to support public safety services to the 22.3<sup>2</sup> million citizens in Southern California.

## **Region 5 Comments**

Region 5 understands the poor position of LA-RICS in trying to upgrade and improve interoperability within Los Angeles County. The passage of the Middle Class Tax Relief and Job Creation Act, specifically Section 6103, requires that the spectrum between 470 MHz and 512 MHz (T-Band) must be given up within 9 years. This was to be the primary spectrum LA-RICS would use to upgrade the Los Angeles County radio systems. With primary use of T-Band by Los Angeles County Agencies and only limited use of 700 and 800 MHz spectrum by those agencies, Region 5 as a whole has been able to plan for public safety “mission critical” LMR systems and meet the needs of the other 9 Counties in the Southern California area primarily

---

<sup>2</sup> Data from 2010 census

with 700 and 800 MHz spectrum<sup>3</sup>. In Region 5, the 800 MHz spectrum has been built out for several years. Counties surrounding Los Angeles including San Diego are now expanding into the 700 MHz band as they find money to upgrade and expand. The County of Riverside is nearly ready to cutover to a new system using P25 phase II technology in the 700 MHz band. The County of San Bernardino is upgrading their existing 800 MHz band system over 5 years and the upgrade includes expanded capacity using 700 MHz spectrum. The City of San Diego has constructed a 700 MHz system for added capacity. The current allocations in the Region 5 plan are expected to be built out over the next 5 years and no additional large blocks of channels are available to be allocated to LA-RICS.

Given the need to utilize the majority of the 700 MHz allocations in counties surrounding Los Angeles County, Region 5 supports LA-RICS waiver request. However, Region 5 requests that the reserve channels (if the waiver is granted) become an allocation in the Region 5 700 MHz Plan to LA-RICS. Also LA-RICS should be required to follow the Region 5 Plan requirements for licensing those channels.

The reason for this request is to insure the reserve channels are utilized in the most spectrum efficient way as LA-RICS develops their system and therefore would be available for best future reuse to meet the spectrum needs in Region 5. The need to use spectrum as efficiently as possible in Region 5 is amply demonstrated by the efforts of Los Angeles County

---

<sup>3</sup> There are channel allocations to the County of Los Angeles and the City of Los Angeles in the Region 5 plan. These existing allocations are all that are available for use over all or a majority of the area the Los Angeles County covers

to seek waivers in the past to use spectrum in TV channels 15 and 16. That coupled with the population size and growth show the need to be spectrally efficient in Region 5. The Region 5 700 plan builds on the work of the 800 MHz plan to reuse spectrum to the maximum extent possible. Many 800 MHz regional plans require licensees to show they will not interfere with other licensees by using contours of 5 dBu for co-channel and 25 dBu for adjacent channel. This allows system to be build assuming “noise limited” interference at the expense of channel reuse. The Region 5 plan required agencies to design their systems for a minimum of 40 dBu signal strength for their coverage area using a combination of low sites (where possible), directional and down tilted antennas to decrease the signal levels out of their coverage area to the maximum possible. The interference levels were established at 20 dBu co-channel and 35 dBu adjacent channel. These levels must be shown not with contours but with a matrix study using the Longley/Rice model. This results in an “interference limited” environment and allows more reuse of channels. The Region 5 700 MHz requires similar use of the 40 dBu coverage signal strength, low sites, directional antennas and down tilted antennas. The 700 Regional plan also requires use of TIA TSB-88 methodology to determine interference to other systems. This update is in response to the use of digital modulation technology used in the 700 MHz band. Requiring LA-RICS to conform to the 700 MHz plan requirements will not be a new burden to them. Both the County and City of Los Angeles have current systems build under the Region 5 800 MHz plan requirements and limited allocations in the Region 5 700 MHz plan that will need to meet plan requirements.

## **Summary**

Because of the shortage of available spectrum in Southern California and the need to vacate the T-Band spectrum, Region 5 supports the LA-RICS waiver request. To insure efficient reuse of the reserve spectrum and thus making it more available for any future use of those channels in Region 5, LA-RICS should be required to follow the Region 5 plan requirements.

David Buchanan

A handwritten signature in cursive script, appearing to read "David Buchanan".

Chair, Region 5 700 MHz Regional Planning Committee